

REMARKS/ARGUMENTS

Claims 1-22, 24-28 and 30-41 remain in this application. Claims 42-50 have been added. Support for these new claims can be found in paragraphs [0042]-[0044] of the specification as found in U.S. Publication No. 20030156561. After amendment, claims 1-22, 24-28 and 30-50 are pending. Applicant believes that the present application is in condition for allowance, and respectfully requests reconsideration of the rejection in light of the remarks set forth below.

Claim Rejections – 35 USC § 102

Claims 1-4 and 7-10 have been rejected under 35 USC § 102(b) as being anticipated by Rich (U.S. Patent No. 5,940,452) - hereinafter “Rich”. Applicants respectfully traverse the rejection in its entirety.

In the “Response to Arguments” section of the Office Action dated February 21, 2008, the Examiner stated that Applicants’ arguments filed January 10, 2008 were not persuasive because limitations that were argued were not presented in the claims. In response, Applicants have amended the independent claims to include the limitation of controlling power consumption in the receiver.

As to independent claims 1 and 7, the Office Action alleges that in Figure 7, Col. 22, line 15 to Col. 24, Rich teaches “*a receiver [702] , including a plurality of receiver chains [126 and 706] adapted for processing in the receiver, for receiving a pilot channel and determining a channel condition of said pilot channel" and "a control system [108] for controlling receive diversity of said receiver [126 and 706] by selecting a number of said plurality of receiver chains based on said determined channel condition."*

In Figure 7, Rich discloses a controller 108 that is configured to selectively receive signals from just one of two receivers 126 and 706. That is, the controller 108 selects only one of the two receivers 126 and 706 via switch 708. “The control signal 722 controls whether the demodulated signal at line 140 from the first receiver 126 or the demodulated signal at line 714 from the second receiver 706 is routed to the controller at line 724.” (Col. 22, lines 49-52). Consequently, Rich teaches a diversity ‘selection’ scheme where the controller 108 selects the best receiver from the two receivers 126 and 706. Such diversity ‘selection’ is distinct from the present invention which claims receive ‘diversity control’. In the claimed ‘diversity control’ scheme, the controller does not merely select a receiver (as in Rich), but rather controls the diversity of the receiver by utilizing a number of receivers.

That is, the number of receivers utilized (selected) by the controller is varied depending on the determined channel condition. Thus, rather than selecting just one of the receivers, the controller intelligently selects a greater or a fewer number of receiver chains based on the determined channel condition to maintain a desired channel reception quality. This is a significant distinction in between the claimed system architecture and the cited prior art. By controlling the number of receiver chains that are utilized at any one time, the present claim invention can control a desired channel condition quality as well as restrict the amount of power consumed for signal reception (i.e., more receiver chains consume more power, fewer receiver chains consume less power). The cited prior art does nothing to either control received channel condition or power consumption since it does not vary the number of receivers used at any one time. Rich merely selects between two channel conditions (in receivers 126 and 706). Such selection between two received signals having associated channel conditions does nothing to actually control the overall receive channel diversity (i.e., select a number of receiver chains to achieve a desired channel diversity).

Consequently, Applicants submit that Rich fails to disclose controlling power consumption in the receiver. For at least this reason, Applicants submit that Rich does not anticipate the newly amended claims.

Claim Rejections – 35 USC § 103

Claims 14-22, 24-28, and 30-41 are rejected under 35 USC § 103(a) as being unpatentable over Rich (U.S. Patent No. 5,940,452), in view of Willey (U.S. Patent No. 6,505,058). Applicants respectfully traverse the rejection in its entirety.

Claimed Elements are Not Taught by the Prior Art

Applicants have amended independent claims 14, 19, 22, 27, 32, 34, 36 and 39 to include subject matter related to controlling power consumption in the receiver. These amendments are similar to those made in independent claims 1 and 7. As discussed above in relation to claim 1, Rich does not teach or suggest this limitation. The Office Action does not assert that Willey teaches or suggests this limitation; this is because Willey is concerned with determining whether to wake up a mobile station, and not how to control power in an operating receiver. Therefore, Rich and Willey fail to teach the recited limitations.

The Office has the burden to show that one of ordinary skill in the art could have combined the elements claimed by known methods, and that in combination, each element would have merely performed the same function as it did separately. “In determining the

propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

The Office Action states that the reasoning for combining the teachings of the cited references would have been “to provide a mobile station a capability of using a single bit message of QPCH, transmitted from the base station, based on a determined diversity to indicate a mode in such a way a mobile can configure itself to sleep mode or not in accordance with the data bit in order to save its battery power within a single charge.” This reasoning appears to improperly rely on the Applicants’ teachings. No independent reason has been provided whereby the teachings of Willey would be combined with those of Rich. While both prior art references Rich and Willey teach various embodiments, there is no objective reason why a person of ordinary skill in the art would choose to combine the claimed elements from among all possible other combinations. Techniques for receive diversity control/selection (Rich) are distinct from QPCH page decoding techniques (Willey). There is no objective reason found in the cited prior art why such different techniques would be combined.

The Office Action appears to rely on the ordinary skill in the art as a reason for making the recited combination. According to MPEP § 2143.01, “a statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill in the art at the time the claimed invention was made’ is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references.” (MPEP § 2143)

No Reasonable Expectation of Success - Lack of Predictability

Additionally, the Office has the burden to show that one of ordinary skill in the art would have recognized that the results of the combination were predictable. Here, there is no reasonable expectation of success in combining the teachings of Rich and Willey since such combination of features is not predictable. In particular, in order to determine “a first data bit of said QPCH ... in accordance with processing of one or more signals produced based on said determined receive diversity”, a close interaction between the QPCH processing module and receive diversity controller is needed. The receive diversity controller is found at the receiver while the QPCH processor is typically found at a higher level processing module.

Consequently, integrating the claimed features involves more than a mere substitution or combination of common components but instead a system architecture design that facilitates the claimed features. There is no reasonable expectation of success in seeking to make these significant architectural modifications to a communication system.

At least for these reasons, Applicants respectfully submit that independent claims 14, 19, 22, 27, 32, 34, 36 and 39 are patentable over Rich and Willey. The pending dependent claims inherit the patentability of their respective independent claims and, as a result, also patentably distinguish over the cited references. For at least these reasons, Applicants respectfully request reconsideration and allowance of the claims.

Allowable Subject Matter

Claims 5-6 and 11-13 would be allowable if rewritten or amended to overcome the rejections under 35 USC § 102 and § 103. Applicants thank the Examiner for this indication of allowability, but maintain that independent claim 1, from which claim 5-6 and 11-13 depend is allowable in its own right. Accordingly, no amendment is necessary at this time.

CONCLUSION

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested. Should any of the above rejections be maintained, Applicants respectfully request that the noted limitations be identified in the cited references with sufficient specificity to allow Applicants to evaluate the merits of such rejections. In particular, rather than generally citing whole sections or columns, Applicants request that the each claimed element be specifically identified in the prior art to permit evaluating the references.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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